

Recommended Traffic Calming Scheme

Kipapa Drive

1. Install bulb outs on both sides of the street at Kipapa Elementary School, raised pedestrian crosswalks and a median at the two school crossings as shown outside of the Kipapa Elementary School.

Expectation: Overall vehicle speeds at each crossing where a recommended treatment is constructed will decrease. The raised median will help to further reduce vehicle speeds. Pedestrian crossing safety should increase due to the lower vehicle speed, narrower pedestrian crossing distance, the safe refuge provided by the median and improved driver visibility of pedestrians and vice versa.
2. Install bulb outs on both sides of the street, a raised pedestrian crosswalk and a median at the pedestrian crossing north of Kuahelani Road.

Expectation: Overall vehicle speeds at each crossing where a recommended treatment is constructed will decrease. The raised median will help to further reduce vehicle speeds. Pedestrian crossing safety should increase due to the lower vehicle speed, narrower pedestrian crossing distance, the safe refuge provided by the median and improved driver visibility of pedestrians and vice versa.
3. Install two median slow points at Mililani High School as shown on the plan in Appendix A. This design consists of four bulbouts that are eight feet wide that allow parking up to the bulbout.

Expectation: Lower vehicle speeds because of the deflection that this device creates. Safer crossings for pedestrians due to the shorter crossing distance and lower vehicle speed.
4. Install a median with two speed tables at the existing crossings in front of Mililani Waena Elementary School. Install an angled slow point at the eastern end of the school to slow down vehicles at the approach to the school.

Expectation: Overall vehicle speeds at each crossing where a recommended treatment is constructed will decrease. The raised median will help to further reduce vehicle speeds. Pedestrian crossing safety should increase due to the lower vehicle speed, narrower pedestrian crossing distance, the safe refuge provided by the median and improved driver visibility.

General

One effective technique to slow vehicles is to park vehicles along both sides of a street. Some subdivisions may have covenants that prohibit on-street parking ensure that residential streets are clear of any vehicles that may limit vehicle speeds. If the neighborhood wants to implement a simple strategy to slow traffic, any such restrictive covenants should be removed. During our travel within the Mililani neighborhood, we saw vehicles parked on every street. If a no-parking covenant exists, it is openly ignored and should be appealed.

Existing speed limits should be evaluated as to appropriateness. Guidelines for posting of appropriate speed limits based on factors such as the function and design of the street would ensure consistency throughout the island. For example, a 25 mph speed limit on a 4 lane arterial may be widely ignored because motorists perceive the width, number of lanes, visibility, land use, and others factors as signs that it is appropriate to drive faster. This behavior was observed in many Mililani areas. For example, a speed limit of 30 mph on the non-residential portions of Lanikuhana Avenue would be more appropriate for the conditions than the current posted 25 mph.

Speed limits are sensitive issues in the case where an artificially low speed has been posted in response to public outrage over a crash or perceived danger. However, posting of these limits does not necessarily modify driver behavior. Increased enforcement, once an appropriate speed is posted, will encourage compliance. If strict enforcement is conducted in an area with an artificially low speed limit, the public perception may be that the area is a deliberate "speed trap." This may dissuade police from enforcing in that area.

Lane widths, landscaping, overall design, and type of intersection control have been proven to be the only effective method of controlling the speeds of most drivers. If a 25 mph speed limit is desirable on a four lane arterial, some roadway changes will be needed to gain compliance by a majority of drivers.

Additional Comments on the Mililani Neighborhood

When the traffic calming project for the Mililani neighborhood was organized, the community looked at the whole of the Mililani area rather than a defined area. As a result, the majority of the comments received related to the arterial road network. Such comments are not part of a traffic calming project as it relates to the management of traffic in residential streets. However, as a service to the City of Honolulu outside of the traffic calming project, we are providing these comments to assist the City in evaluating and looking for solutions to the arterial road problems that the residents expressed.

Lanikuhana Avenue

1. Paint white edge lines 9 feet from either side of the centerline on both sides of the street where Lanikuhana Avenue transitions from four lanes to two lanes. By narrowing the lanes to 9 feet, a standard accepted for residential streets, the remaining 9 feet of surface

provides ample space for parking and a safer space for drivers to open their doors. By visually narrowing the space drivers tend to travel slower. Installation of raised pavement markers would ensure effective nighttime visibility and act as a discouragement to cross the edge line on the curves. The edge lines would encourage drivers to park on the street, effectively narrowing the street.

Expectation: Marginal decrease in speed that would extend over a larger area as more vehicles are parked on the street.

2. Restripe where Lanikuhana Avenue is four lanes wide with a median. Narrow the vehicular lanes to 10 feet to permit the marking of bike lanes on both sides of the street.

Expectation: Marginal decrease in speed. Increased bicycle travel.

Because of the significant role of this street within the network, the number of residential streets serviced, the length of the street, access to a major shopping center/town center complex, and traffic volumes, the use of vertical deflection devices such as speed humps are not recommended.

3. Replace the painted center turn lane and other visual markings with a raised median in the area of the shopping center/town center complex. Traffic signals are scheduled for installation at the shopping center. Before the signal design is finalized, we recommend a review of the other traffic issues in the vicinity of the signal and consideration of alternative designs. It may achieve more community goals to narrow this section of Lanikuhana Avenue to one lane in each direction, add bike lanes, a raised median, and install roundabouts at each access point to the shopping center -- Makaimoimo Street, Hohani Street and Anania Drive.

Expectation: Each roundabout would slow traffic, beautify the area, reduce crashes and increase the ease of ingress and egress to the shopping center, especially for drivers making left turns. These roundabouts may be cheaper to construct than the proposed traffic signals.

4. Remove left-turn acceleration lane on Lanikuhana Avenue at Keaoopua. Use of this type of lane is very rare, and it seems to be causing concern for people within the neighborhood. Primarily, this type of lane, which is usually very short like this one, encourages drivers to turn left from the side-street, cross only one half of the road, then stop, slow, or occasionally accelerate into the through lanes. This type of maneuver by left turning drivers is unexpected by drivers in the through lanes on the main street and can, depending on the behavior of the left turn driver, scare the main street driver.

Expectation: Fewer drivers travelling along Lanikuhana Avenue being scared by drivers turning left from Keaoopua Street. Consequently, fewer crashes are likely.

Kamaio Street

1. Construct bulb outs and a raised median on Kamaio Street between Kamaio Place and Mahapili Place.

Expectations: Reduced vehicle speeds and improved pedestrian access to the park.

Keaolani Street

We recommend gateway treatments at each end of Keaolani Street, a roundabout at the intersection of Aaahi Street, and tree wells staggered along the street to protect vehicles parked on the street. This street is a 24-foot wide residential street with parking on both sides, and it is being used as the preferred connection between Lanikuhaka Avenue and Meheula Parkway. On-street parking and tree wells will physically narrow the street to one lane. Drivers cutting through will find slower travel and residents will not have to park on the sidewalk. If these measures prove to be inadequate because of numerous driveways, a speed table or two would be desirable.

Expectation: Reduced cut-through traffic and reduced speeds for the remaining vehicles.

Meheula Parkway

Restripe the six lane sections of the parkway to provide 3 x 10-foot wide lanes, plus a 6-foot wide bike lane.

Expectation: Increased bicycle safety and convenience. Some vehicular speed reduction is possible.

Restripe the four lane section to provide two 10-foot lanes, a painted median, and a 6-foot wide bike lane. Note that excessive width in a bike lane may attract vehicular use. See the American Association of State Highway Transportation Officials (AASHTO) bicycle facilities guidelines for additional design detail.

Expectation: Increased bicycle safety and convenience. Some vehicular speed reduction may occur.

- 3 Modify the right turn slip lanes to reduce vehicular speed and increase vehicular turning capacity. At the intersection with Kamehameha Highway. The existing right turn lanes require those drivers that have to stop to yield to turn their heads far to the left to see. This can be difficult for some drivers with a limited range of motion. Drivers in this situation often try to use their rear vision mirrors to select gaps, or they may let go of the steering wheel so they may turn their bodies to see approaching vehicles. The result is a reduced right turn capacity and the possibility of a significant crash rate. These type of right turn lanes also increase the risk to pedestrians, because under free flow conditions

drivers can turn at relatively high speeds. The “squarer” design shown on the plans typically limit vehicular speeds to 14 to 18 mph. Apart from slower vehicles, they move the pedestrian starting point closer to the approaching driver’s line of sight.

On the exit from Meheula Parkway to Kamehameha Highway, a State Department of Transportation facility, the acceleration lane has been eliminated. This change reflects a growing awareness of the uselessness of acceleration lanes in urban areas where the opportunity to merge is limited and the length of the merge lanes is often too short for the speeds involved. In addition, they too make it hard for drivers to select gaps; drivers must use their rear view mirrors to guess the gaps in an approaching vehicular stream. As a consequence, fewer and fewer drivers use these acceleration lanes. Their elimination reduces crashes and increases capacity of the “square” right turn lane. Benefits to pedestrians are much lower speeds exhibited by right turning vehicles and a much shorter crossing distance. This design of the right turn slip lane should be used at all intersections where right turn slip lanes are used.

Expectation:	Lower speeds of right turn vehicles which reduce pedestrian crashes, rear-end crashes and improved capacity of the right turn. Pedestrian crossings are shorter and safer.
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Lanikuhana Avenue and Meheula Parkway

Both of these roads play a major role in servicing the Mililani area. Meheula Parkway provides the primary access to the H-3 freeway, while Lanikuhana Avenue distributes many people over a very wide area. Both roads are very attractive and would be the envy of many cities. Meheula Parkway has no pedestrian access except at the intersections, while Lanikuhana Avenue only has pedestrian and vehicular access points at the intersections along the eastern portion of the street. The other end of Lanikuhana Avenue provides direct access to homes and side streets. Therefore, one part of this street is an arterial road and the other end, the western end, a collector road.

Roundabouts had been suggested at several locations along Lanikuhana Avenue. To be truly effective, and to reduce the number of weaves that drivers make, it would be desirable to make Lanikuhana Avenue a two-lane street with roundabouts at the major intersections, except maybe at Kamehameha Highway. It is doubtful that this expense would be cost-effective in light of the many safety projects that require funding.

Meheula Parkway/Kamehameha Highway

Implement a Red Light Running prevent program. Drivers who violate red lights can be constrained by heavy police enforcement or the installation of red light cameras. These special cameras are being installed in an increasing number of cities across the U.S. to reduce the number of drivers who “run-the-red.” The most effective solution to this problem is the construction of roundabouts.